

## **Preliminary organizational culture scale focused on artifacts**

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### **Summary**

In this preliminary study, an organizational culture scale was developed to assess cultural artifacts according to Schein's typology (1985). It includes a set of cultural artifacts to measure the extent to which an organization is more or less traditional. A total of 249 managers from a range of different companies responded to the items. Preliminary analysis yielded a one-dimensional scale with 14 items with high internal consistency and homogeneity.

The concept of organizational culture has attracted broad scholarly interest and a number of questionnaires have been developed to measure it. For example, Ashkanasy, Broadfoot, & Falkus (2000), reviewed 18 scales published between 1975 and 1992. Interestingly, only three of these focused on measuring “patterns of behavior”, according to Schein’s typology (1985). The others considered a deeper level, that is, values and beliefs. However, none focus on artifacts, which are the first level of Schein’s typology. This paper was intended to be an initial inquiry into this gap since, as Rousseau (1990) affirmed, the most visible levels of organizational culture can be appropriately studied quantitatively.

Schein (1985) distinguished three levels of culture: artifacts and creations, values, and basic assumptions. He treated basic assumptions as the essence of culture and values and behaviors as observed manifestations of the cultural essence. As Schein affirmed (1999, p. 15) “The easiest level to observe when you go into an organization is that of artifacts: what you see, hear, and feel as you hang around”. Therefore, the definition of artifacts includes directly observable elements (e.g., dress codes, physical space, technology) as well as other more subtle components, such as the way status is demonstrated by members, how decisions are taken, communications, disagreements and conflicts, balance between work and family, etc. The essential difference between values and basic assumptions is that both inform observers of the meaning the artifacts have, understanding “why” people do what they do in an organization. For this reason, “survey responses can be viewed as cultural artifacts and as reflections of the organization’s climate, but they do not say anything about the deeper values or shared assumptions that are operating” (Schein, 1999, p. 86). However this does not mean that Schein found no utility in evaluating artifacts. In fact, after defining the business problem, they are the first necessary step towards deciphering the company’s culture.

To measure the most visible level of any organization culture, a scale was developed. It included a set of cultural artifacts to measure the extent to which an organization is traditional (half of the scale was reverse items). The scale was conceived with the goal of obtaining two poles of the same continuum. Higher scores in the scale mean that the organization is traditional, while lower scores mean the inverse: it is a progressive culture. With this purpose, a study of cultural artifacts deemed most relevant was undertaken: strategy; human relationships; selection schemes; promotion and dismissal; training programs; motivation, evaluation, and incentives; absenteeism and rotation; communication processes and conflict resolving; type of structure, rules, and technology; climate and environment.

Although the definition might be criticized, the most characteristic traits of any traditional culture are (see Table 1): short term perspectives; overestimating the economic goals; highly competitive and markedly individualistic; promotion based on personal friendships and family ties; creativeness and capacity of innovation employee unvalued; importance of customs and traditions; evaluation schemes and controls based on failure and not on success; avoidance at all costs of conflict; centralized, rigid, and bureaucratic structure; new technologies not encouraged; minimum use of marketing strategies, and no importance given to environmental conservation.

### Method

The sample was obtained using a variety of procedures: company and management listings, personal contacts within organizations and institutions as well as key people such as consultants, executives or managers. The collection of information took four months. 450 questionnaires were given to very different Spanish companies, 249 of which were returned from approximately 120 organizations, together with 9 incomplete questionnaires that were eliminated from analysis. The return rate was between 55% and 57%. Of the respondents, 211

were men (84.7% of the total sample) and 37 women (14.9%), plus one individual who did not specify sex. The average age was 38.3, with a standard deviation of 8.5, and range of 25 to 63 years.

The initial scale of 24 items were rated on a 6-point Likert scale anchored by 1 totally disagree and 6 totally agree. To develop a questionnaire measuring a relatively specific construct ( DeVellis, 1991) only those items with a corrected item-total correlation  $>.40$  were retained for a preliminary analysis of item reliability, internal consistency, and factor structure (see Table below). Ten items were then eliminated from the analysis, so the final version included 14 items. Total scores ranged from 14 to 84, with higher scores reflecting more traditional culture. The mean and standard deviation were 41.8 and 12.2, respectively. Internal consistency as Cronbach alpha was .86.

The intercorrelation matrix for 14 items was submitted to an exploratory factor analysis using principal axis analysis with a varimax rotation (Boyle, Stankov, & Cattell, 1995). The Kaiser-Meyer-Olkin ratio ( $KMO = .86$ ) was high. The Bartlett test of sphericity was significant ( $p < .0001$ ). The exploratory factor analysis yielded three factors with eigenvalues greater than 1.0. The first factor accounted for 36.1% of the variance whereas two other factors accounted for 9.2% and 7.4% of the variance, respectively (eigenvalues of factors were 5.1, 1.3, and 1.0). An examination of the scree plot (Cattell, 1966) indicated that structure was appropriately described as having one factor. Factor loadings and communalities for the one factor solution are presented in Table 1. All items loaded strongly on the factor (all factor loadings  $>.45$ ).

INSERT TABLE 1 HERE, PLEASE

As a first approach, which needs to be confirmed with further research, these preliminary findings indicate the scale may be further developed for assessing traditional cultural artifacts. The common variance explained was only 36.1% and this result is considered a limitation of the scale. Moreover, construct validity must be examined and evidence presented for concurrent, predictive, as well as content validity. Social desirability can also be subjected to empirical inquiry. These lines of research are required for application items in the real world. Such effort is clearly needed because “Culture becomes a powerful influence on members’ perceiving, thinking, and feeling; and these predispositions, along with situational factors, will influence the members’ behavior” (Schein, 1985, p. 320). As a consequence, conceiving organizations in a traditional way may be too narrow because culture influences strategy, structure, and procedures of any organization with major implications.

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Table 1 ITEMS, CORRECTED ITEM-TOTAL CORRELATIONS ( $r_{tot}$ ) AND FACTOR STRUCTURE FOR FINAL 14 ITEMS OF ORGANIZATIONAL CULTURE SCALE OF ARTIFACTS (ENGLISH VERSION)

<b>In this company</b>	$r_{tot}$	Factor loading	$h^2$
1. Generally, a long term vision of things is valued more. <sup>a</sup>	.42	.47	.22
2. The focus on problems takes into account mainly their effects on economic factors, with little consideration of the impact on people.	.49	.50	.25
3. Human relations are principally based on co-operation, consensus, and group well-being (the contrary of competitiveness and individual well-being). <sup>a</sup>	.54	.59	.35
4. The most important bases for promotion are personal friendships and family ties.	.62	.66	.44
5. Creativeness and capacity of innovation is valued in employees. <sup>a</sup>	.61	.69	.48
6. In this company, it is often heard "it has always been done like that" or "this is the proper way of doing it".	.54	.55	.30
7. The aims of systems of evaluation and control are to punish more than to reward.	.57	.61	.37
8. Conflict is treated as a normal aspect of company life, from which valuable experience can be gained. <sup>a</sup>	.55	.60	.36
9. The structure is highly centralized, i.e., the majority of matters have to pass through very few hands.	.55	.54	.29
10. The structure is flexible, i.e., it adapts quickly and successfully to changes that may affect its survival. <sup>a</sup>	.54	.62	.38
11. The rules and regulations favor unnecessary bureaucracy that must be rigorously respected.	.50	.54	.28
12. There is a constant concern to keep the technology up to date. <sup>a</sup>	.44	.46	.21
13. Marketing strategies such as segmentation and market research are used. <sup>a</sup>	.43	.49	.24
14. My company is really concerned about the conservation of nature and takes measures to this respect. <sup>a</sup>	.41	.45	.20

<sup>a</sup> Reverse scored items.